

CLEAN VERSION OF CLAIMS

1. A printed circuit board wiring configuration analysis system for analyzing a wiring configuration, comprising:

an object determination unit for determining if there exists a high speed signal wiring, said determination being made after identifying a pair of a driver and a receiver;

a wiring segment identifying unit for identifying a wiring segment that is nearest to said board edge from a group of segments;

a plane edge identifying unit for identifying a plane edge that is nearest, in a perpendicular direction, to a wiring between the driver and the receiver of said segment;

a unit for determining a perpendicular distance between the wiring segment extending from the driver to the receiver and said plane edge;

a unit for computing a minimum interlayer distance required between a wiring layer of said segment and a layer of said plane;

a distance determination unit for comparing said perpendicular distance determined and said interlayer distance computed; and

thereafter, automatically identifying any segments that are not desirable.

2. A printed circuit board wiring configuration check system as claimed in claim 1, further comprising:

a unit for identifying a voltage level of a pulse signal flowing through said wiring segment; and

a unit for identifying a high speed signal wiring when said voltage level is not lower than a reference voltage.

3. A printed circuit board wiring configuration analysis system as claimed in claim 2, wherein

said unit for identifying the voltage level of the pulse signal determines a voltage level thereof on the basis of an equation which contains, as its variable, a maximum applicable frequency, a rise time, a pulse width and an amplitude.

4. A printed circuit board wiring configuration analysis system as claimed in claim 1, wherein

said wiring configuration is classified, as its type, a micro strip line, a single strip line, or a double strip line.

5. A printed circuit board wiring configuration analysis system as claimed in claim 1, further comprising

a display unit for displaying a message in accordance with a result of the analysis.

6. A method for analyzing a wiring configuration, comprising the steps of:
determining if there is a high speed signal wiring, said determination being executed after identifying a pair of a driver and a receiver;

identifying a segment that is part of said high speed signal wiring and which is nearest to a board edge from a group of segments;

identifying a plane layer edge that is nearest, in a perpendicular direction, to a wiring between a driver and a receiver;

determining a perpendicular distance between the wiring extending from the driver to the receiver of said segment and said plane layer edge;

computing a minimum interlayer distance required between a wiring layer of said segment extracted and said plane layer;

comparing said perpendicular distance determined and said interlayer distance computed; and

displaying a message that contains a predetermined instruction corresponding to said wiring in accordance with a result of said comparison.

7. A computer program for analyzing a wiring configuration which is designed on a printed circuit board, comprising the steps of:

determining if there is a high speed signal wiring, said determination being made after identifying a pair of a driver and a receiver from a group of components;

identifying a segment that includes said high speed signal wiring and is nearest to said board edge from a group of segments;

identifying a plane layer edge that is nearest, in a perpendicular direction, to a wiring between the driver and receiver;

determining a perpendicular distance between the wiring and said plane layer edge;

computing a minimum interlayer distance required between a wiring layer of said segment and said plane layer;

comparing said perpendicular distance and said interlayer distance computed; and

identifying any undesirable aspects of said wiring.

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